

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO. 10/087,859
ATTORNEY DOCKET NO. Q68747

REMARKS

Applicant requests that the Patent Office acknowledge Applicant's claim to foreign priority, and to indicate in the next Communication from the Patent Office that the certified copy of the priority document, Japanese Patent Application No. 2001-066595 dated March 9, 2001, has been made of record in the file.

Applicant thanks the Patent Office for initialing the references listed on the PTO/SB/08 A & B form submitted with the Information Disclosure Statement filed on March 5, 2002 and returning an initialed copy of the PTO/SB/08 A & B, thereby confirming that the listed references have been considered.

Applicant herein adds new claims 14-16. No new matter has been added. Support for new claims 14 and 15 can be found, for example, in Figure 9 and pages 22 and 23 of the instant specification. Support for new claim 16 can be found, for example, in Figures 5, 7, 9, 11 and 13 of the instant specification. Entry and consideration of the new claims 14-16 is respectfully requested.

Claims 1-16 are all the claims presently pending in the application.

1. Claims 1-3 stand rejected under 35 U.S.C. § 112 (2nd para.) as allegedly being indefinite. Applicant traverses the rejection of claims 1-3 for at least the reasons discussed below.

Applicant has amended claims 1-3 to more clearly recite the relationship of the claim elements to one another and their operation. Applicant submits that the § 112 (2nd para.) rejection of claims 1-3 has been overcome, and respectfully requests withdrawal of same.

2. Claims 1, 7-9, 12 and 13 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ito (U.S. Patent No. 5,859,632). Applicant traverses the rejection of claims 1, 7-9, 12 and 13, and insofar as the rejection might apply to new claims 14-16, for at least the reasons discussed below.

To support a conclusion that a claimed invention lacks novelty under 35 U.S.C. § 102, a single source must teach all of the elements of a claim. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). A single source must disclose all of the claimed elements arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus, the cited reference must clearly and unequivocally disclose every element and limitation of the claimed invention.

Ito fails to teach or suggest at least a switch circuit that controls a capacitor to switch between an amplifier and a peak voltage level to generate two separate voltage levels, wherein one voltage level is a high level with respect to the peak voltage level and the other voltage level is a low voltage level with respect to the peak voltage level, as recited in claim 1. In Figure 1 of Ito (cited by the Patent Office), the intermediate voltages that have a high level with respect to V_{DD} (*i.e.*, V_1 and V_2) are generated by one set of capacitors (C_1 and C_2), and the intermediate voltages that have a low level with respect to V_{DD} (*i.e.*, V_4 and V_5) are generated by a different

set of capacitors (C3 and C4). Figures 3, 4, 5, 7, 8 and 10 of Ito disclose similar circuit configurations, in that different intermediate voltages are generated by different capacitors. No capacitors are switched between the high-level intermediate voltage levels and the low-level intermediate voltage levels. In sum, Ito does not teach or suggest that the same capacitor is used to generate a low voltage level in conjunction with an amplifier, and to generate a high voltage level in conjunction with a peak voltage level.

Based on the foregoing reasons, Applicant submits that Ito fails to teach or suggest all of the claimed elements as arranged in claim 1. Therefore, under *Hybritech* and *Richardson*, Ito clearly cannot anticipate the present invention as recited in claim 1. Applicant submits that claim 1 is allowable, and further submits that claims 7-9, 12 and 13 are allowable as well, at least by virtue of their dependency from claim 1. Applicant respectfully requests that the Patent Office withdraw the § 102(b) rejection of claims 1, 7-9, 12 and 13.

With respect to new claims 14 and 15, Ito does not teach or suggest at least using the output voltage of an amplifier and a discharge voltage of a capacitor to generate an output voltage that is greater than the output voltage of the amplifier. Furthermore, Ito does not teach or suggest using an external capacitance to charge another capacitor that is used for the generation of a high-level intermediate output voltage.

With respect to new claim 16, Ito does not teach or suggest at least the structure of the claimed circuit or its connection relationships. *See, e.g.*, Figure 1 of Ito.

3. Claims 2-6 stand rejected under 35 U.S.C. § 103(a) as allegedly under Ito in view of Takahashi *et al.* (U.S. Patent No. 6,087,580). Applicant traverses the rejection of claims 2-6, and insofar as the rejection might apply to new claims 14-16, for at least the reasons discussed below.

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). To make its *prima facie* case of obviousness, the USPTO must satisfy three requirements:

- a) The prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the artisan to modify a reference or to combine references. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).
- b) The proposed modification of the prior art must have had a reasonable expectation of success, as determined from the vantage point of the artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed. Cir. 1991).
- c) The prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.* Regardless of whether the USPTO relies on an express or an implicit showing of motivation, the USPTO is obligated to provide

particular findings related to its conclusion, and those findings must be clear and particular. *Id.*
A broad conclusionary statement, standing alone without support, is not “evidence.” *Id.*; *see also, In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.*

The combination of Ito and Takahashi *et al.* fails to teach or suggest at least a switch circuit that controls a capacitor to switch between an amplifier and a peak voltage level to generate two separate voltage levels, wherein one voltage level is a high level with respect to the peak voltage level and the other voltage level is a low voltage level with respect to the peak voltage level, as recited in claim 1 and included in claims 2 and 3. At best, the combination of Ito and Takahashi *et al.* would produce a circuit that includes the blocking diodes of Takahashi *et al.*, which are unnecessary in the present invention. Furthermore, the combination of Ito with Takahashi *et al.* does not use at least one capacitor to generate both high-level and low-level intermediate voltages that are based on a peak voltage level. Applicant has already discussed the deficiencies of Ito with respect to voltage generation for claim 1. Takahashi *et al.* does not teach or suggest the low-level/high-level voltage generation with respect to a peak voltage level. Instead, Takahashi *et al.* discloses that the high-level voltage generation would be equal to the peak voltage level, which is contrary to the present invention. Thus, Applicant submits that the

combination of Ito and Takahashi *et al.* cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Applicant submits that one of skill in the art would not be motivated to combine the two references. *In re Dembiczak* and *In re Zurko* require the Patent Office to provide particularized facts on the record as to why one of skill would be motivated to combine the two references. Without a motivation to combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). The Patent Office must make specific factual findings with respect to the motivation to combine references. *In re Lee*, 277 F.3d 1338, 1342-44 (Fed. Cir. 2002). Although the Patent Office provides a motivation analysis with respect to power saving and reduction of capacitive and switching elements, both Ito and Takahashi *et al.* lack any teaching about the desirability of one capacitance for the generation of low-level/high-level intermediate voltage levels. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of Ito and Takahashi *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 1, and included via dependency in claims 2 and 3. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 2 and 3.

The combination of Ito and Takahashi *et al.* fails to teach or suggest at least a pair of series-connected capacitors that are used to generate both high-level intermediate voltages and low-level intermediate voltages respectively when connected to a peak voltage and to amplifiers, as recited in claim 4. Ito fails to teach or suggest switching capacitors between high-level intermediate voltages and low-level intermediate voltages. Specifically, Ito does not teach or suggest that the same capacitor is used to generate a low voltage level in conjunction with an amplifier, and a high voltage level in conjunction with a peak voltage level. The combination of Takahashi *et al.* with Ito still fails to teach or suggest the use of the same set of series-connected capacitors to generate two high-level intermediate voltage levels as well as generating two low-level intermediate voltage levels. Takahashi *et al.* discloses the switching of a capacitor in the generation of two different voltage levels, but the disclosure is limited to a single capacitor. There is no disclosure in Takahashi *et al.* of generating multiple voltage levels with series-connected capacitors. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Applicant submits that one of skill in the art would not be motivated to combine the two references. Although the Patent Office provides a motivation analysis with respect to power saving and reduction of capacitive and switching elements, both Ito and Takahashi *et al.* lack any teaching about the desirability of series-connected capacitors that are used to generate both high level and low level intermediate voltage levels. Both references rely on single capacitances for the generation of intermediate voltage levels, and neither reference teaches or suggests the use of series-connected capacitances for the generation of high and low level intermediate voltage

levels. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of Ito and Takahashi *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 4. Therefore, the combination of Ito and Takahashi *et al.* clearly cannot render the present invention obvious as recited in claim 4. Thus, Applicant submits that claim 4 is allowable, and further submits that claim 5 is allowable as well, at least by virtue of its dependency from claim 4. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 4 and 5.

The combination of Ito and Takahashi *et al.* fails to teach or suggest switching at least a pair of capacitors to be series-connected in order to generate a high-level intermediate voltage respectively when connected to a peak voltage, as recited in claim 6. As noted above, Ito fails to teach or suggest switching the same capacitor(s) between high-level intermediate voltage levels and low-level intermediate voltage levels. The combination of Takahashi *et al.* with Ito still fails to teach or suggest switching a pair of capacitors to be series-connected for the generation of a high level intermediate voltage level. Takahashi *et al.* discloses the switching of a capacitor in the generation of two different voltage levels, but the disclosure is limited to a single capacitor. There is no disclosure in Takahashi *et al.* of generating a high-level intermediate voltage level by series-connecting capacitors with a switching means. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Applicant submits that one of skill in the art would not be motivated to combine the two references. Although the Patent Office provides a motivation analysis with respect to power saving and reduction of capacitive and switching elements, both Ito and Takahashi *et al.* lack any teaching about the desirability of series-connecting capacitors via a switching means to generate a high level intermediate voltage level. Both references rely on single capacitances for the generation of intermediate voltage levels, and neither reference teaches or suggests the use of series-connecting capacitances for the generation of a high-level intermediate voltage. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of Ito and Takahashi *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 6. Therefore, the combination of Ito and Takahashi *et al.* clearly cannot render the present invention obvious as recited in claim 6. Thus, Applicant submits that claim 6 is allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claim 6.

With respect to new claims 14 and 15, the combination of Ito and Takahashi *et al.* does not teach or suggest at least using the output voltage of an amplifier and a discharge voltage of a capacitor to generate an output voltage that is greater than the output voltage of the amplifier. Furthermore, the combination of Ito and Takahashi *et al.* does not teach or suggest using an external capacitance to charge another capacitor that is used for the generation of a high-level intermediate output voltage.

With respect to new claim 16, the combination of Ito and Takahashi *et al.* does not teach or suggest at least the structure of the claimed circuit or its connection relationships. *See, e.g.*, Figure 1 of Ito; Figure 1 of Takahashi *et al.*

4. Claims 10 and 11 stand under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ito. Applicants traverse the rejection of claims 10 and 11 for at least the reasons discussed below.

Claims 10 and 11 depend from claim 1, and therefore incorporate all the recitations of claim 1. As noted above with respect to claim 1, Ito fails to teach or suggest switching capacitors between high-level intermediate voltage levels and low-level intermediate voltage levels. Specifically, Ito does not teach or suggest that the same capacitor is used to generate a low voltage level in conjunction with an amplifier, and a high voltage level in conjunction with a peak voltage level. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Applicant submits that one of skill in the art would not be motivated to modify the reference. Although the Patent Office provides a motivation analysis with respect to power saving and reduction of capacitive and switching elements, Ito lacks any teaching about the desirability of a switch circuit that controls a capacitor to switch between an amplifier and a peak voltage level to generate two separate voltage levels, wherein one voltage level is a high level with respect to the peak voltage level and the other voltage level is a low voltage level with respect to the peak voltage level. Thus, Applicant submits that the Patent Office cannot fulfill

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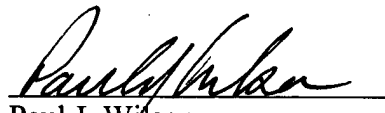
the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that Ito fails to teach or suggest all of the claimed elements as arranged in claim 1, and included via dependency in claims 10 and 11. Therefore, the Ito clearly cannot render obvious the present invention as recited in claims 10 and 11, and Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 10 and 11.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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